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| 09/497,801 | 02/04/2000 | David Angelo Ferrucci | YO999-201 | 7921 |

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EXAMINER

HUTTON JR, WILLIAM D

| ART UNIT | PAPER NUMBER |
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2176

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/497,801

Applicant(s)

FERRUCCI ET AL.

Examiner

Doug Hutton

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 21 and 25-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 21, 25-32 and 37 is/are rejected.
- 7) ☒ Claim(s) 33-36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A Request for Continued Examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after Final Rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 August 2005 has been entered. Applicant has also filed on 16 September 2005 a Preliminary Amendment with the Request for Continued Examination.

Applicant's Response

In Applicant's Responses, Applicant amended the Specification, amended Claims 1, 5, 21, 25, and 33-37, added new Claims 38-40, and argued against all objections and rejections previously set forth in the Office Action dated 16 June 2005. Claims 1-7, 21 and 25-40 are currently pending.

The objection to the Specification and the objections to Claims 5 and 33-36 that were previously set forth are withdrawn. The 112, second paragraph rejections for Claims 32 and 33 are withdrawn. The 102 rejections for Claims 33-36 are withdrawn.

Claim Objections

Claim 30 is objected to because of the following informalities:

- the term “*them*” in Line 3 should be amended to — the document knowledge variables — so that it is clear that what is “linked” is a domain knowledge element and a document knowledge element.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 40 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claim 40:

The claim recites “*wherein elements of said domain model are dynamically manipulated by a user during an interactive configuration of a document*” (see Lines 1-2). The Specification of the present invention does not mention a user “***dynamically manipulating***” a domain ***during*** document assembly. Rather, during document assembly, the domain is manipulated only by the ***software*** of the system.

Thus, Claim 40 recites subject matter without support in the original disclosure.

If the examiner is incorrect, then Applicant should point out the specific page and line numbers in the Specification that describe the limitation recited in Claim 40.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 21, 25-32 and 37 remain rejected under 35 U.S.C. 102(e) as being anticipated by Porter, U.S. Patent No. 6,473,892. Also, Claims 38-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Porter.

Claim 1:

Porter discloses *a method of linking domain knowledge to document knowledge* (see Figures 1-10; see Column 1, Line 1 through Column 20, Line 34 – Porter discloses this limitation, as indicated in the cited figures and text and in the following discussion), *comprising:*

- *rendering document knowledge as textual components with variable fields* (**The examiner's interpretation** → This limitation means that a series of questions is presented to the user of the document assembly system, wherein the questions comprise text components that have variable field lengths - hereinafter, "text variables." In **Porter** – see Figures 1 and 2; see Column 6, Line 63 through Column 7, Line 53 → Porter discloses this limitation in that the document assembly system comprises a library that includes form generators, wherein each form generator is associated with a particular type of document and is used to assemble that type of document. Each form generator comprises code that selects the structural features of the document type, properties to be used when assembling the document type and text to be included in the document type.);
- *building an object-oriented domain model comprising domain knowledge* (**The examiner's interpretation** → This limitation means that a domain has been built, wherein the domain is "object-oriented" and comprises a collection of objects - hereinafter, "domain objects" - that includes every possible scenario regarding the questions posed to the user, the answers submitted by the user and the objects used in assembling a document. In **Porter** – see Figures 1 and 2; see Column 6, Line 63 through Column 8, Line 14; see Column 8, Lines 15-33; see Column 12, Lines 23-51; see Column 17, Lines 24-55 → Porter discloses this limitation in that the document assembly system comprises objects that are used to obtain input from the user and assemble a document. For example, the system comprises the domain "Construction Loans," which includes the objects

needed to assemble a "Construction Loan" document. The system also comprises a "Loan Agreement" domain and a "Real Estate Document" domain. Each domain comprises document definition objects, party definition objects, signature definition objects, text objects and macro objects associated with a type of document. The system also comprises source code objects that allow the various objects associated with the particular type of document to communicate. Accordingly, the domains of the system are "object-oriented." Moreover, Porter suggests modular organization and structure of a document system that simplifies the job of programmers by grouping procedures into easily-manageable modules that allow the programmer to edit a single object of the system and thereby propagate the change to all related objects. This is the essence of "object-oriented" programming.), *wherein said building an object-oriented domain model comprises organizing data input by a user into said domain model* (**The examiner's interpretation** → This limitation means that the answers given by the user are used to obtain objects from the domain in order to assemble the document. In **Porter** – see Figures 1 and 2; see Column 7, Lines 11-53 – Porter discloses this limitation in that the document assembly system, in order to assemble a document, takes the input data (i.e., the answers) submitted by the user, creates an "input data" object and accesses all of the associated objects via associated procedures in order to dynamically assemble the document. Thus, through the associated procedures, the input data submitted by the user is "*organized into*" the domain.); and

- *linking said document knowledge to said domain knowledge, by linking said domain knowledge to document knowledge variables (The examiner's interpretation → This limitation means connections between the "text variables" and the "domain objects" have been established. In **Porter** – see Column 8, Lines 16-34; see Column 14, Line 64 through Column 15, Line 7 – Porter discloses this limitation in that the document assembly system expressly links the "Construction" domain to the "Loan Type" variable and the "Texas" domain to the "DocST" variable. That is, when the user enters "Construction" into the "Loan Type" question, the system links this data input with the "Construction" domain and thus accesses all of the associated objects needed to assemble that particular type of document. Also, factors that affect the document content appear as variables or procedures in source code rules. That is, the rules link the document model with the domain objects used to assemble the document.).*

Claim 2:

Porter discloses the method of Claim 1, wherein said document knowledge variables are linked to domain knowledge elements in said domain model, such that if rules and constraints are tailored or developed to maintain consistency of the domain model, a document model will be affected (see Column 15, Lines 21-67; Column 17, Lines 24-55 → Porter discloses this limitation in that the document assembly system accepts data input from the user and this data input is linked to a particular domain, where the procedures associated with the input require that specific text objects be

inserted into the document. For example, as expressly disclosed in Porter, a user may input "Arkansas," where the "Arkansas" domain requires that a party name be inserted into the document. Additionally, as indicated in the above rejection for Claim 1, a programmer may edit a single object or procedure of the system, and the system propagates the change to all objects associated with the edited object or procedure.).

Claim 3:

Porter discloses *the method of Claim 1, wherein elements in the domain model influence what appears in a rendered document* (Porter discloses this limitation in that the domain comprises the objects that are used to assemble a document).

Claim 4:

Porter discloses *the method of Claim 1, wherein said domain model comprises an explicit domain model which is reusable for a plurality of documents* (Porter discloses this limitation in that the domains may be used to create a plurality of documents at different times. Thus, the domains are "reusable" and "loosely coupled" to the created documents.).

Claim 5:

Porter discloses *the method of Claim 1, wherein said object-oriented domain model is independent of any document to be rendered* (as indicated in the above rejections for Claims 1 and 4, the domains are "loosely coupled" to the created

documents), *said domain model being usable for any of a plurality of documents* (as indicated in the above rejections for Claims 1 and 4, Porter discloses this limitation) *and consistency of a document model is maintained based on said linking* (as indicated in the above rejections for Claims 1 and 2, any edit to a single object or procedure of the document assembly system is propagated to all objects associated with the edited object or procedure).

Claim 6:

Porter discloses *the method of Claim 1, wherein a plurality of documents are configurable from the domain model* (as indicated in the above rejections for Claims 1 and 4, Porter discloses this limitation).

Claim 7:

Porter discloses *the method of Claim 1, wherein said domain model comprises a stand-alone domain model, which is built separate and independent from a document* (as indicated in the above rejections for Claims 1, 4 and 5, Porter discloses this limitation).

Claim 26:

Porter discloses *the method of Claim 1, wherein said domain knowledge comprises domain knowledge elements* (As indicated in the above rejection for Claim 1, Porter discloses this limitation. Moreover, "domain knowledge" inherently includes

“domain knowledge elements,” and thus this limitation does not further limit the scope of the invention.), *and said domain knowledge elements are linked to said document knowledge variables* (as indicated in the above rejection for Claim 1, Porter discloses this limitation).

Claim 27:

Porter discloses *the method of Claim 26, wherein said domain knowledge elements are dynamically bound to said document knowledge variables through an object model access expression* (**The examiner’s interpretation** → The phrase “*object model access expression*” merely signifies the rules that establish the links generated at runtime between the series of questions presented to the user, the answers submitted by the user and the objects that are accessed in order to assemble the document. In **Porter** – as indicated in the above rejection for Claim 1, Porter discloses this limitation).

Claim 28:

Porter discloses *the method of Claim 27, wherein each of said document knowledge variables is assigned an object model access expression* (Porter discloses this limitation in that the rules of the document assembly system address all possible answers submitted by the user)

Claim 29:

Porter discloses *the method of Claim 27, further comprising:*

- *enforcing the link between said domain knowledge and said document knowledge whenever a change occurs in at least one of said object model access expression of one of said document knowledge variables and said domain model* (Porter discloses this limitation in that, because the rules **define** the links, the links between the domain knowledge and the document knowledge are always “enforced.” That is, any change that is made in the rules that establish the links between the document model and the domain will be “enforced” whenever a document is assembled.).

Claim 30:

Porter discloses *the method of Claim 27, further comprising:*

- *evaluating the object model access expression of each of said document knowledge variables and linking them to appropriate domain knowledge elements whenever new document knowledge is inputted* (As indicated in the above rejection for Claim 4, the domains are “loosely coupled” to the created documents. Thus, each time the user answers the series of questions to create a new document, the document assembly system executes the rules that establish the links between the data input by the user and all of the associated objects needed to assemble the document.).

Claim 31:

Porter discloses *the method of Claim 27, further comprising:*

- *re-evaluating the object model access expression of each of said document knowledge variables whenever the domain model is reorganized* (see Column 17, Lines 23-55 – Porter discloses this limitation in that the document assembly system is modular and allows to a programmer to edit the domain objects. Because the domains are “loosely coupled” to the documents created by the document assembly system, the system will “re-evaluate” the rules that establish the links upon any use of the system subsequent to the editing of the domain objects.).

Claim 32:

Porter discloses *the method of Claim 26, wherein said document knowledge variables are linked to said domain knowledge elements by selecting specific properties from the domain model by an object representation and access language, wherein said object representation and access language comprises a plurality of ORAL expressions* (As indicated in the above rejections for Claims 1 and 2, Porter discloses rules that link the series of questions presented to the user via a GUI to the objects in the source code library. These rules comprise an “*object representation and access language*” and a “*plurality of ORAL expressions*” in that the rules are written in a computer language and comprise a plurality of rules. The rules link document knowledge variables to domain knowledge elements by “*selecting specific properties from the domain model*” in that the rules affect the content and structure of the assembled document. That is, based on the

user's answers to the series of questions presented to the user, the rules cause the system to access all of the associated objects needed to assemble the document.).

Claim 38:

Porter discloses *the method of Claim 1, wherein said domain knowledge comprises domain knowledge elements* (as indicated in the above rejection for Claim 26, Porter discloses this limitation), *said domain knowledge elements being linked to said document knowledge variables* (as indicated in the above rejection for Claim 1, Porter discloses this limitation),

wherein said domain knowledge elements are dynamically bound to said document knowledge variables through an object model access expression (as indicated in the above rejection for Claim 27, Porter discloses this limitation),

wherein said method further comprises:

- *enforcing the link between said domain knowledge and said document knowledge whenever a change occurs in at least one of said object model access expression of one of said document knowledge variables and said domain model* (as indicated in the above rejection for Claim 29, Porter discloses this limitation);
- *evaluating said object model access expression of each of said document knowledge variables and linking them to appropriate domain knowledge elements whenever new document knowledge is inputted* (as indicated in the above rejection for Claim 30, Porter discloses this limitation); *and*

- *re-evaluating the object model access expression of each of said document knowledge variables whenever the domain model is reorganized (as indicated in the above rejection for Claim 31, Porter discloses this limitation), wherein elements of said domain model are dynamically manipulated during an interactive configuration of a document (as indicated in the above rejection for Claim 27, Porter discloses rules that establish the links generated at runtime between the series of questions presented to the user, the answers submitted by the user and the objects that are accessed in order to assemble the document).*

Claim 39:

Porter discloses *the method of Claim 1, wherein elements of said domain model are dynamically manipulated during an interactive configuration of a document (as indicated in the above rejection for Claim 38, Porter discloses this limitation).*

Claim 40:

Porter discloses *the method of Claim 1, wherein elements of said domain model are dynamically manipulated by a user during an interactive configuration of a document (as indicated in the above rejection for Claim 1, Porter discloses this limitation in that the document assembly system submits the series of questions to the user and receives answer input by the user to access the associated objects in order to assemble the document).*

Claim 21:

The claim merely recites a system comprising a “means for” performing the method of Claim 1. As indicated in the above rejection for Claim 1, Porter discloses the functional limitations recited in Claim 21. Also, as clearly indicated in Porter, the document assembly system is computer-based and thus includes all computer hardware and software needed to assemble documents. Applicant’s “means for” performing the functions recited in the claim include no hardware and software components that are not disclosed in Porter.

Thus, Porter discloses every limitation of Claim 21, as indicated in the above rejection for Claim 1.

Claim 25:

Claim 25 merely recites computer software for performing the method of Claim 1. Porter discloses computer software that performs the method recited in Claim 1. Thus, Porter discloses every limitation of Claim 25, as indicated in the above rejection for Claim 1.

Claim 37:

Porter discloses *a method of generating document* (see Figures 1-10; see Column 1, Line 1 through Column 20, Line 34 – Porter discloses this limitation, as indicated in the cited figures and text), *comprising:*

- *rendering document knowledge as textual components with variable fields* (as indicated in the above rejection for Claim 1, Porter discloses this limitation);
- *building an object-oriented domain model comprising domain knowledge* (as indicated in the above rejection for Claim 1, Porter discloses this limitation),
wherein said building an object-oriented domain model comprises organizing data input by a user into said domain model (as indicated in the above rejection for Claim 1, Porter discloses this limitation); *and*
- *linking said document knowledge to said domain knowledge by linking said domain knowledge to document knowledge variables* (as indicated in the above rejection for Claim 1, Porter discloses this limitation).

Allowable Subject Matter

Claims 33-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 33-36:

The prior art fails to disclose or suggest the combination of limitations recited by the claims. More specifically, the prior art fails to disclose or suggest the specific rules of ORAL that are recited in the claims.

Response to Arguments

Applicant's arguments filed 16 August 2005 have been fully considered but they are not persuasive. The examiner notes that Applicant submitted no arguments in support of the claims in the response dated 16 September 2005

Arguments for Claims 1-7, 21 and 25-37:

Applicant argues that Porter fails to disclose "*building an object-oriented domain model comprising domain knowledge, wherein said building an object-oriented domain model comprises **organizing data input by a user into said domain model***"

(emphasis added) because the data input by the user is not organized as an object model. Applicant also argues that the claimed invention creates a domain model that is **independent** from the documents being created and may be used later to create other documents (emphasis added). See *Response* (dated 16 August 2005) – Page 9, second and third full paragraphs.

The examiner disagrees.

Firstly, in the document assembly system of Porter, the data input by the user is organized as an object model (see Column 7, Lines 11-14). Porter expressly discloses in the cited text that the document assembly system gathers the data input by the user and generates an input data object. The input data object comprises an object "model" in that it "models" the document to be assembled, is a portion of a knowledge-based system (i.e., the document assembly system disclosed in Porter) and is used by the knowledge-based system.

Secondly, as explained in the above rejections for Claims 1 and 4-7, the domains of the system disclosed in Porter are "loosely coupled" to the created documents and may be used to create a plurality of documents at different times. Thus, the domains are "independent" from the documents being created.

Accordingly, as indicated in the above discussion and in the above rejection for Claim 1, Porter discloses the limitation.

Conclusion

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doug Hutton whose telephone number is (571) 272-4137. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached at (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

WDH
November 18, 2005

A handwritten signature in black ink, appearing to read 'D. Hutton', with a stylized flourish at the end.

**DOUG HUTTON
PATENT EXAMINER
TECH CENTER 2100**